



Munich Personal RePEc Archive

# **On the Problem of Economic Power: Lessons from the Natural History of the Hawaiian Archipelago**

Funk, Matt

The Linnean Society of London

15. December 2009

Online at <http://mpra.ub.uni-muenchen.de/19371/>  
MPRA Paper No. 19371, posted 13. January 2010 / 11:06

### ABSTRACT

One of the greatest logicians of the twentieth century, Bertrand Russell, proposed that *Economic power, unlike military power, is not primary, but derivative*. Curiously, this conjecture has received scarce attention. This paper explores this theory. Our illustrative discourse tests this overlooked theory in the light of evolution: We model *Homo* evolution by sampling the past  $\approx 1000$  years of cultural evolution in the Hawaiian archipelago. Our analysis concludes Russell's theory is true.

**Key terms:** economic power; military power; evolutionary game theory; cultural evolution; evolutionary stable strategy; resource holding power; long-distance dispersal; Kamehameha; Hawaiian history; Hawaiian sovereignty; Hawaiian annexation

---

<sup>£</sup> Matt Funk, Fellow  
The Linnean Society of London  
Burlington House, Piccadilly, London W1J 0BF, United Kingdom  
[matt@funkisland.org](mailto:matt@funkisland.org)  
Copyright © Funk 2009



## DEDICATION

To my Father<sup>1</sup>

---

<sup>1</sup> It has been an old custom for authors to offer to their [fathers] the fruits of their studies in belles letters, from a persuasion that no work can be published with propriety but under the auspices of the [father], and that the knowledge of a [father] should be more general, and of the most important kind, as its influence is felt so keenly by... his [family]. We have many instances of the favorable reception which Augustus and his illustrious successors conferred on the works presented to them; and this encouragement of the Sovereign made the sciences flourish. The consideration of Your... superior indulgence for attempts of this sort, induced me to follow this example, and makes me at the same time almost forget my own inability when compared with the ancient writers. One advantage, however, I derive from the nature of this work, as it requires no elegance of expression, or extraordinary share of genius, but only great care and fidelity in collecting and explaining, for public use, the instructions and observations of our old historians of military affairs, or those who wrote expressly concerning them.

My design in this treatise is to exhibit in some order the peculiar customs and usages of the ancients in the choice and discipline of their new levies. Nor do I presume to offer this work to You... from a supposition that you are not acquainted with every part of its contents; but that you may see that the same salutary dispositions and regulations which your own wisdom prompts You to establish for the happiness of [our family], were formerly observed by the founders thereof; and that You... may find with ease in this abridgement whatever is most useful on so necessary and important a subject (1, *dedication*).

## EPIGRAPH

Instead of trying to pigeonhole the natural world into prescribed classifications, Kant had argued, scientists should work to discover the underlying scientific principles at work, since only those general tenets could fully explain the myriad natural phenomena. Thus Kant had extended the unifying tradition of Thales, Newton, Descartes, et al.... Humboldt agreed with Kant that a different approach to science was needed, one that could account for the harmony of nature... The scientific community, despite prodigious discoveries, seemed to have forgotten the Greek vision of nature as an integrated whole.... 'Rather than discover new, isolated facts I preferred linking already known ones together,' Humboldt later wrote. Science could only advance 'by bringing together all the phenomena and creations which the earth has to offer. In this great sequence of cause and effect, nothing can be considered in isolation.' It is in this underlying connectedness that the genuine mysteries of nature would be found.

This was the deeper truth that Humboldt planned to lay bare – a new paradigm from a New World. For only through travel, despite its accompanying risks, could a naturalist make the diverse observations necessary to advance science beyond dogma and conjecture. Although nature operated as a cohesive system, the world was also organized into distinct regions whose unique character was the result of all the interlocking forces at work in that particular place. To uncover the unity of nature, one must study the various regions of the world, comparing and contrasting the natural processes at work in each.

The scientist, in other words, must become an explorer.

–Gerard Helferich, *Humboldt's Cosmo's*, 2004

## §1. In Defense of Exploration

Economic analysis through exploration is an unusual, but far from unprecedented proposition.

But in light of the fact that it has been decidedly out of fashion since Condorcet coined the phrase “social science” in 1780 (2), perhaps a few preliminary words in defense of this unfashionable method may be warranted.

As I noted in a seminar delivered to the Department of Biology at the University of Prince Edward Island in November of 2008 (3), I have explored – both literally and theoretically – Åland (4-5), Mustique (6) and many aspects of many insular bio-geo-politico-economic models (7-11), and discovered the comparative method employed by naturalists since the time of Humboldt (12-22) continues to offer extraordinary analytical value.

In short, in the poetics of Proust's *À la recherche du temps perdu* (23):

*Le seul véritable voyage ... ce ne serait pas d'aller vers de nouveaux paysages, mais d'avoir d'autres yeux, de voir l'univers avec les yeux d'un autre, de cent autres, de voir les cent univers que chacun d'eux voit.*<sup>2</sup>

Indeed, exploration represents the very essence of all human problem solving endeavours, and, moreover, has served as the primary driver of human dispersal, which began, in earnest, 2 Mya, as a lush tropical forest transformed into the Sahara Desert, directing intrepid *Homo* survivors “Out of Africa,” spreading out and fighting to hold unfilled, *relatively insular*, ecological niches.

This exploration, this human *Struggle for Life* (24), continued for the next million years and continues on into the present. As recently as one thousand years ago, several niches of insularity remained undiscovered and unoccupied by *Homo sapiens*: Viking explorers set out in search of a better world, and, ≈980AD, discovered the uninhabited island of Iceland. About the same time, Polynesian explorers set out on their voyaging canoes from Tahiti, crossed 2,500 nautical miles of the great Pacific Basin, and settled the Hawaiian archipelago.<sup>3</sup> Five hundred years later, Columbus crossed the Atlantic to the Caribbean and North America, Cabot explored Newfoundland, Cortez explored Mexico, and Magellan and Juan Sebastian del Cano became the first circumnavigator.

---

<sup>2</sup> “The only true voyage of discovery ... would be not to visit new landscapes, but to possess other eyes, to see the universe through the eyes of another, of a hundred others, to see the hundred universes that each of them sees” (23, p 131) [often translated as: *The only true voyage of discovery consists not in finding new lands, but in seeing them with new eyes.*].

<sup>3</sup> Polynesian voyagers from the Marquesas had previously discovered and established small settlements in Hawaii ≈300 AD.

But as time moved forward, these *explorations* became more and more about *seeing these landscapes with new eyes* than about being the first to arrive, claiming natural resources, and discovering and filling an unclaimed ecological niches. Yes, the voyages of the early European explorers were largely ones of conquest, but Cook and Vancouver also began to systematically map the territory, to chronicle their journeys, and to begin to grasp and piece together the *nature* of the world in which we live. And of course the *unity of nature*, the holiest of grails which Humboldt first sought, revealed herself in full to a young, inexperienced naturalist aboard the *Beagle*,<sup>4</sup> and to Alfred Russell Wallace, exploring *Island Life* in the Malay Archipelago alone, each independently piecing together solutions to the most fundamental problem of their era.

In 1872 HMS *Challenger*<sup>5</sup> took this British tradition to the next level, a tradition which continued with Scott on HMS *Discovery*. Yes, exploration began facilitating the greatest breakthroughs in science: Alfred Wegener – who's lost body remains frozen in Greenland's unforgiving ice – revolutionized geology,<sup>6</sup> Routledge uncovered several mysteries on Easter Island, Carter unearthed Egyptian wisdom in Valley of the Kings, and Hans Hass opened our eyes to the sea as they had never been before.

But of course much – perhaps even *most* – about all of these places and their biotic and abiotic processes remain to be explored, re-discovered, and discovered yet for the first time. As Wallace remarked in 1855:

Every naturalist who has directed his attention to the subject of the geographical distribution of animals and plants, must have been interested in the singular facts which it presents. Many of these facts are quite different from what would have been anticipated... None of the explanations attempted from the time of

---

<sup>4</sup> WHEN on board HMS *Beagle*, as naturalist, I was much struck with certain facts in the distribution of the inhabitants of South America, and in the geological relations of the present to the past inhabitants of that continent. These facts seemed to me to throw some light on the origin of species — that mystery of mysteries, as it has been called by one of our greatest philosophers. On my return home, it occurred to me, in 1837, that something might perhaps be made out on this question by patiently accumulating and reflecting on all sorts of facts which could possibly have any bearing on it. After five years' work I allowed myself to speculate on the subject, and drew up some short notes (24, p 1).

<sup>5</sup> On December 21, 1872, HMS *Challenger*, a 2,300-ton corvette originally built with 18 cannons, left Portsmouth, England, under the command of Captain Geogre Nares. Powered by sail... and steam..., *Challenger* was setting out on a mission never before undertaken – a full-scale expedition dedicated exclusively to scientific study of the oceans (25, p 7).

<sup>6</sup> Through most of the history of science it was assumed that the continents of the earth had always held their current positions. In the early 1900s, however, the Austrian meteorologist Alfred L. Wegener put forth the radical theory that at one time all of the land of this planet had been a single huge mass, which he termed "*Pangea*" (Greek "pantos" [whole] and "*gia*" [earth]), but had subsequently broken into northern and southern positions and then further split into smaller units that dispersed or "drifted" through the surrounding ocean to form the various current continents.

For many years, Wegener's theory was usually not seriously considered, but scientific discoveries made since the mid-1900s now show that his idea is basically correct (26, pp 5-6).

Linnæus are now considered at all satisfactory; none of them have given a cause sufficient to account for the facts known at the time, or comprehensive enough to include all the new facts which have since been, and are daily being added....

If we now consider the geographical distribution of animals and plants upon the earth, we shall find all the facts beautifully in accordance with, and readily explained by, the present hypothesis. A country having species, genera, and whole families peculiar to it, will be the necessary result of its having been *isolated* for a long period, sufficient for many series of species to have been created on the type of pre-existing ones, which, as well as many of the earlier-formed species, have become extinct, and thus made the groups appear isolated....

To discover how the extinct species have from time to time been replaced by new ones down to the very latest geological period, is the most difficult, and at the same time the most interesting problem in the natural history of the earth. The present inquiry, which seeks to eliminate from known facts a law which has determined, to a certain degree, what species could and did appear at a given epoch, may, it is hoped, be considered as one step in the right direction towards a complete solution of it (16).

Indeed, yet today, the 5<sup>th</sup> of April, 2009, I submit, *remarkably few of the explanations attempted from the time of Linnæus are yet at all satisfactory*. But the following exploration is an effort to improve upon these explanations.

## §2. On the Problem of Economic Power

My most recent field trip to Hawai'i offered another opportunity to simplify<sup>7</sup> and convey a complex, difficult, slippery truth, and, moreover perhaps the most fundamental economic principle of all, which I had confirmed on my expedition to Mustique last year (6). I might also note that this fundamental truth remains largely unknown, unrecognized, or, at the very least, very dimly seen or perceived.

Consider, for example, a recent statement by one of Popper's most well-known students, George Soros:

These unprecedented measures have begun to have an effect: interbank lending has resumed and the London Interbank Offered Rate (LIBOR) has improved. The financial crisis has showed signs of abating. But guaranteeing that the banks at the center of the global financial system will not fail has precipitated a new crisis that *caught the authorities unawares*: countries at the periphery, whether in Eastern Europe, Asia, or Latin America, could not offer similarly credible guarantees, and financial capital started fleeing from the periphery to the center (27, p 3).

Why did capital flee from the periphery to the center? Why were we caught unaware? Because the “authorities” did not grasp the first principle of economics & evolution: *Economic power is not primary, but derivative*.

---

<sup>7</sup> Compared with continents... [islands] have a restricted area and definite boundaries, and in most cases their biological and geographical boundaries coincide. The number of species and of genera they contain is always much smaller than in the case of continents, and their peculiar species and groups are usually well defined and strictly limited in range... their relations with other lands are often direct and simple and even when they are more complex are far easier to comprehend than those of continents (17, pp 241-242).

Economic power, unlike military power, is not primary, but derivative. Within one State, it depends on law; in international dealings it is only on minor issues that it depends on law, but when large issues are involved it depends upon war or the threat of war. It has been customary to accept economic power without analysis, and this has led, in modern times, to an undue emphasis upon economics, as opposed to war and propaganda, in the causal interpretation of history.

Apart from the economic power of labour, all other economic power, in its ultimate analysis, consists in being able to decide, by the use of armed force if necessary, who shall be allowed to stand upon a given piece of land and to put things into it and take things from it (28, p. 95).

We shall clarify this conjecture in due course, but in the meantime, I might suggest this theory remains rather dimly perceived because a primary logical implication is decidedly out of favour: “*Si vis pacem, para bellum*.”<sup>8</sup> Thus it may prove fruitful to digress and explore the significance of perhaps the most influential *magnum opus* in human history, and, moreover, its adoption as an *Evolutionary Stable Strategy* for  $\approx 1000$  years:

The most influential... treatise in the western world from Roman times to the 19<sup>th</sup> Century was Vegetius' DE RE MILITARI. Its impressions on our own traditions of discipline and organization are everywhere evident.

The Austrian Field Marshal, Prince de Ligne, as late as 1770, called it a golden book and wrote: “A God, said Vegetius, inspired the legion, but for myself, I find that a God inspired Vegetius.” Richard Coeur de Lion carried DE RE MILITARI everywhere with him in his campaigns, as did his father, Henry II of England. Around 1000 AD Vegetius was the favorite author of Foulques the Black, the able and ferocious Count of Anjou. Numerous manuscript copies of Vegetius circulated in the time of Charlemagne and one of them was considered a necessity of life by his commanders. A manuscript Vegetius was listed in the will of Count Everard de Frejus, about 837 AD, in the time of Ludwig the Just.

In his Memoirs, Montecuculli, the conqueror of the Turks at St. Gotthard, wrote: “However, there are spirits bold enough to believe themselves great captains as soon as they know how to handle a horse, carry a lance at charge in a tournament, or as soon as they have read the precepts of Vegetius.” Such was the reputation of Vegetius for a thousand years.

Manuscript copies dating from the 10<sup>th</sup> to the 15<sup>th</sup> centuries are extant to the number of 150. DE RE MILITARI was translated into English, French, and Bulgarian before the invention of printing. The first printed edition was made in Utrecht in 1473. It was followed in quick succession by editions in Cologne, Paris and Rome. It was first published in English by Caxton, from an English manuscript copy, in 1489 (1).

Alas, it seems 1000 years of popularity was not sufficient enough; thus my expedition in February was a quest to come to understand the rejection of this time-tested strategy; my focal point was the Pu'ukohala Heiau...

---

<sup>8</sup> “If you wish for peace, prepare for war,” is undoubtedly the most common, popular translation, but Flavius' exact words (*Igitur qui desiderat pacem, praeparet bellum.*), are more accurately translated as, “Therefore, he who wishes peace, should prepare war; he who desires victory, should carefully train his soldiers; he who wants favourable results, should fight relying on skill, not on chance.”



One remarkable aspect of this temple is that it took thousands of men one year to construct it, passing one million stones *hand-to-hand* from twenty miles away, up and over Kohala Mountain, from the Pololu Valley:

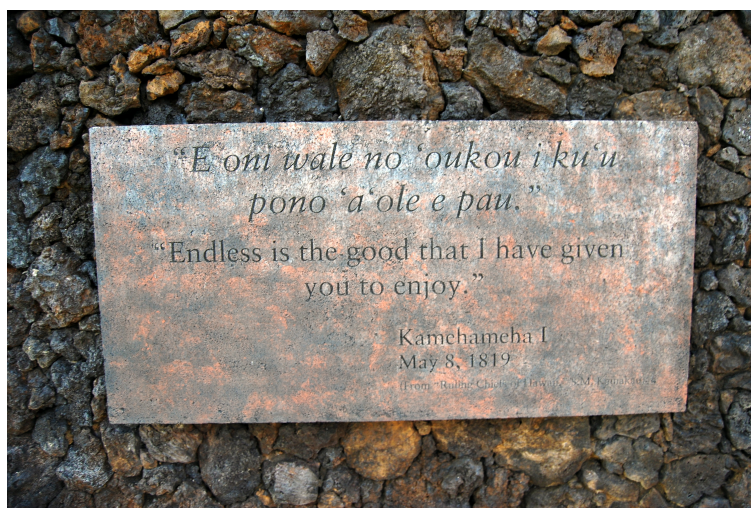




Why were these rocks passed hand-to-hand, from man-to-man, over such a great distance and mountainous terrain? To answer this weighty question, we must begin at the end of a mighty and great life:

Kamehameha grew no better but steadily worse, and after three days they took him... to his own sleeping house. At the close of the day he was carried to the eating house, where he took a mouthful of food and a swallow of water, but when he was asked to speak made no reply. About ten o'clock he was again carried to the eating house and again took a mouthful of food and a swallow of water. Ka-iki-o-'ewa then asked him for a last word, saying, "We are all here, your younger brothers, your chiefs, your foreigner. Give us a word." "For what purpose?" asked the chief. "As a saying for us" (*I hua na makou*) (29, p 211).

Visitors to the *Pu'ukohala Heiau National Historic Site* may find the finale of Kamakua's account of Kamehameha's last words, etched in marble on the exterior of the impressive visitor's centre:



But the problem is this: these were *not* Kamehameha's final words, and the very essence of our entire argument lies within this discrepancy, which was, hereto, a lost treasure, buried in the deep, patiently awaiting discovery.

Kamakua did not have access to any eyewitness accounts, and, in his day, the sole extant writings (John Young's dairy) from such an account was lost in a flood. But one of Kamakua's Elders, Stephen L. Desha, a scholar who predated Kamakua by forty years, *did* seek and discover a first-hand account.

Although Kamakua (29) was undoubtedly well-versed in Desha's writings, including *Kamehameha and his Warrior Kekuhaupi'o* (30), it is perhaps revealing that he failed to quote – or, perhaps more likely, *misquoted* – this



true scholar and unflinching *realist*:<sup>9</sup>

At this time Kamehameha was again lifted by the *ali'i* [an individual of high hereditary rank] and taken into the *ahi'a* house. This was late at night. When the feet of the *ali'i* who were carrying Kamehameha's body entered the house, he fainted for the third time. When the *ali'i* saw this, they quickly took him back to the Ke'olohiani Hale. A little while after this, Kamehameha revived again.

Then Kalanimoku took charge and evicted the numerous *ali'i* from the house save only for the wives (*na ali'i wahine*) and his sons and daughters. Also two of his old, long-time canoe paddlers remained. These were Nakuielua and his old companion. The reason these two old canoe paddlers of Kamehameha remained within the house with their *ali'i* was that they were to be the *moepu'u* [death companions] of Kamehameha, prepared to go with their lord on the road which has no return.

At this time Kalanimoku bowed over at the side of the weakened *ali'i* and asked him: "*E Kalani e*, what of us?"

Kamehameha only gazed at him and he made no reply.

Then some prominent *ali'i kane* [male chiefs] of the land entered again, whom Kalanimoku was unable to put outside, and they stood close to where Kamehameha lay. One of them asked him: *Ea, e Kalani e*, [O heavenly one] what of us? A little word for us."

When Kamehameha heard these words from some of the *ali'i*, he closed his eyes and then opened them. The *ali'i* again asked him: "*E Kalani e*, a little word for us." Kamehameha's weary eyes gazed hither and yon at this gathering then said weakly:

"Why are you making demands?" Then Kalanimoku bent over quickly, close to Kamehameha's head and said gently: "*E Kalani ho'i e*, a little word for us."

When Kamehameha heard Kalanimoku asking for a little word for them, he spoke these final words:

"Endless is the good I have conquered for you" (30, pp 485-486).

---

<sup>9</sup> When it was fully daylight and the skin of man could be seen, Kamehameha commanded his paddlers to take the canoe ashore. When the warriors on the shore realized that the canoe was going to land, they closed their ranks to prevent the landing. Kamehameha moved forward to the bow of one of the double-canoe hulls, grasping his great spear, and Kekuhaupi'o moved to the other bow, standing ready before that Maui multitude.

While Kamehameha's canoe was moving shoreward those on shore fully realized that this was truly a war canoe of the Hawai'i people. Amazement grew among the Maui multitude at the daring of the people on the canoe in coming ashore, because the cove was covered over with great numbers of warriors standing ready. Nevertheless the canoe did not retreat. When the canoe reached striking distance the leader of the Maui warriors ordered his men to hurl their spears at this Hawai'i canoe which was landing wrongfully and to direct their spears straight at the men standing on the bows of the double canoe.

At the same time, Kamehameha's men stood ready on the platform of the canoe with their *polulu* spears. At the onset of battle Kamehameha and his companion Kekuhaupi'o caught the Maui people's spears and they piled up alongside Kamehameha's canoe hulls. At the same time Kamehameha called out to his few warriors on board his canoe to prepare to move ashore immediately. Kekuhaupi'o and Kamehameha seized the spears lying alongside their canoe and commenced to hurl them at the Maui people. When the Maui people saw the genuinely fearless and remarkable actions of these warriors an inward chill occurred, weakening their warlike thoughts, and their spears were hurled uselessly. At this moment Kekuhaupi'o and his chiefly foster son arrived in the midst of those Maui people and began to slay them with such terrible effect that they fled, leaving their dead behind. When the people fled Kamehameha did not follow them but he turned and spoke to his teacher who had entered with him into this superhuman fight: "Perhaps we should return from whence we came, as we have been moistened by surfing on the famous waves of this land?" These words were spoken with a smile....

Some of those Maui warriors who had been put to flight ran to Kahekii, who questioned one of them: "What news of the battle at the shore?"

The news, O heavenly one, is that we were put to flight by only two warriors, one of them garbed in his feather cloak and helmet. It is understood that this was a truly great chief, godlike. Though there were many of us we were slain with our own spears which had been seized by those men. The other man had a very stout body, with dark features and square shoulders, and I have never seen the like of these men. Our spears were piled alongside their canoe hulls and they became a way for them to come ashore. When they came on land those godlike men continued to slay us. If we had not run from that battlefield there would have been no one to bring the news (30, pp 39-40).

Kamehameha didn't say, "endless is the good that I have *given* to you," he said, "endless is the good I have *conquered* for you." Although the gravity of this seemingly subtle difference may not be immediately apparent to those unfamiliar with the cultural evolution of Hawaii, Kamehameha's final words freight enough power to bring tears to the eyes of at least one explorer familiar with the Natural History and cultural evolution of this most "wonderfully isolated" archipelago, to borrow a descriptive phrase Wallace used often in *Island Life* (17).

For the past thousand years – since the first arrival of voyaging canoes from Tahiti, Hawaiian history has been dominated by constant warfare, political instability, and extreme economic uncertainty, punctuated by two *relatively brief* periods of peace, prosperity, and political stability. Contrary to popular myth, surfing was *not* the sport of Kings, it was *Lua*, the art of bone-breaking.

After the first arrival of Tahitians  $\approx 1000$  AD, the first 800 years of Hawaiian history may be readily summarized as a constant state of inter-island warfighting, fear, misery, volatility, and uncertainty. Each island kingdom was perpetually consumed with conquering or being conquered by neighbouring island kingdoms. And this brings us back to an important question we are now presently well-positioned to answer: Why were one million rocks past hand-to-hand by thousands of men ( $\approx 16,000$ ) from Polulu Valley to Pu'ukohala from 1790 to 1791? Perhaps at this juncture we should note that the heiau at Pu'ukohala is a temple dedicated to the war-god *Ku*. The casual observer may see the construction of the Pu'ukohala Heiau as an exercise in futility, directed by a war lord deluded by superstition. But a more thorough exploration of our great leader reveals he fully grasped perhaps the most profound politico-economic principle: *Si vis pacem, para bellum*.

We should also offer a bit of perspective on the magnitude of Kamehameha's campaign: In 1790 the United States military numbered 5,000 troops. At this point in time Kamehameha had 16,000 soldiers under his command.

And Kamehameha had a plan: The construction of this heiau was essentially a means for *training* – *for strengthening* – his troops for their final cooperative effort: to bring *peace and prosperity* to the Hawaiian archipelago.

After setting out in 1791 to *conquer* the island kingdoms neighbouring his kingdom on the big island of

Hawai'i (which was ultimately achieved in 1810), Hawaii entered into and enjoyed its very first, relatively brief, nine year period of peace, prosperity, and political stability.<sup>10</sup>

Why so brief?

This period of peace, prosperity, and tranquillity came to an abrupt end shortly after Kamehameha's son, Liholiho, dismantled the kapu system, ordered the destruction of the war temples and idols, and, furthermore, perhaps since he did not have a warrior instructor as his father had had,<sup>11</sup> Liholiho despised the thought of war, refused to discuss it with his *ali'i*, and “often escaped from reality by drinking, gambling and seeking other pleasures” (31, p 25).

Realism is invariably too bitter for liberal escape-artists to swallow.<sup>12</sup>

The famous battle call of his father, as he led his troops into countless battles, “Forward my brethren, drink of the bitter waters, there shall be no going back” (30, p 490) fell upon the deaf ears of his imbecilic son.

In the course of my exploration of the Pu'ukohala Heiau, I had the great fortune of gaining valuable insights from Gregory A. Cunningham, Interpretive Ranger, National Park Service, The U.S. Department of the Interior...

---

<sup>10</sup> The consolidation of the Hawaiian Islands by Kamehameha into one kingdom was one of the greatest achievements in Hawaiian history. Three important factors contributed to this achievement: 1) the foreigners with their weapons, advice and physical aid; 2) the feudal Hawaiian society with its lack of distinct tribes having intense tribal loyalties; and probably the most important influence 3) the personality of Kamehameha.

High-born and trained to lead, Kamehameha possessed all the qualities of a strong leader. Powerful in physique, agile, fearless and possessing a strong mind, he easily inspired loyalty in his followers. Though ruthless in war, he was kind and forgiving when the need arose. He used new things and new ideas to promote his own interests. He appreciated the advantages offered by the foreigners and used them in his service. Yet he never fell into their power. Kamehameha's good judgement and strong will prevailed. Through constant vigilance and internal strength, he held his kingdom together until the last days of his life (31, p 21).

<sup>11</sup> A certain man from Kohala arrived at Ke'ei, and on meeting Kekuhaupi'o was questioned as to his lord, Chief Kamehameha. The man replied frankly:

When you left your chief, he engaged in the pleasures of surfing and lele kawa, and also in the “famous favourite occupation of our chiefs,” and when he began to engage in these pleasures he was followed by his common people. Pleasure is the work at Kohala these days, and the farms are abandoned and weeds growing in them. If the young chief continues thus, famine will come to the land and to us.

When Kekuhaupio heard those words from that Kohala man, he immediately prepared to leave his family in Ke'ei and go to Kohala, since he cherished his lord. When he arrived in Kohala he went to Kamehameha's house and inquired for him. He was told that the young chief and his companions had gone to enjoy themselves with lele kuwa and surfing. When Kekuhaupi'o heard these words from some of Kamehameha's men he sought his foster son at the lele kawa place. When that young chief was informed that his instructor was seeking him he quickly left the leaping place. He joined his instructor, who, without delay or uncertainty, spoke: '*E Kalani e*, cease your activity, my lord. This is not the activity which will gain you the island. Return to your war maneuvers, care for the little man and the big man, for this that you are now doing has no future, my lord' (30, p 65).

<sup>12</sup> It may also be relevant to consider the fact that Liholiho was raised during the years of his father's hard-earned peace, as is typical of this problem. As Vegetius observed, “in the midst of peace, war is looked upon as an object too distant to merit consideration” (1).



### §3. Discussion

During my initial exploration of Pu'ukohala, at the end of Cunningham's fascinating tour of this hallowed ground, he kindly led me back to the information centre and, after generously listening to more than he may have wanted to hear about the nature of my research, Cunningham thoughtfully suggested a half-dozen superb volumes, all of which I immediately purchased from their well-stocked bookstore.

One of these gems was *Kamehameha and his Warrior Kekuhaupi'o* (30).

One week later, on my third and final visit to Pu'ukohala, after careful review of these volumes on the beach, I pointed out the discrepancy between Kamakua's and Desha's accounts of Kamehameha's final words.

Cunningham stated he was unaware of this considerable discrepancy but, without skipping a beat, offered, "Hawaiians don't like the word *conquer*."

Indeed, it seems Cunningham was right on the mark, Hawaiians, like Kamehameha's son Liholiho and countless Americans and Europeans today, those raised in this brief, mirage-like stretch of peace since the end of the Cold War, have developed distastes for words and phrases such as *conquer, military training, the Second Amendment, military power, and war* – and that's exactly why *Hawaii* no longer belongs to *Hawaiians*.

Naturally, it did not take long for this island paradise to slip away from Liholiho, for he clearly did not grasp that *economic power is derivative, not primary*.

Political instability quickly returned to the Hawaiian islands. Economic uncertainty prevailed. Foreign powers began circling the Hawaiian islands like sharks. The Hawaiian kingdom's centre of power and former glory faded like cheap plastic in the hot Kohala sun, and, in time, a few *haoles* with a few guns<sup>13</sup> took it all away<sup>14</sup> and procured the protective shield of a nation with sufficient *Resource Holding Power* (*military power*) to help steer Hawaii back toward the the state of peace and prosperity Kamehameha and his trusted warrior, Kekuhaupi'o, had once *conquered* for them.

Political stability, prosperity, and peace did not return to this islands again until 1900, until the islands became *the possession*, a territory of a nation which grasped this greatest of profound truths: *Si vis pacem, para bellum*.<sup>15</sup>

Yes, though this evolutionary stable strategy was quite clear in (1) and exhaustively detailed by Adam Smith

---

<sup>13</sup> The Hawaiian League developed two inner factions: a radical wing which favored the abolition of the monarchy and the setting up of a republic, possibly even seeking annexation to the United States; and a conservative wing which favored retaining the monarchy, but wanted a change in the ministry and a drastic revision of the constitution. To this latter group, a republic was a last resort should the king refuse to agree to the reforms demanded.....

Believing that Kalakaua would not willingly agree to its reforms, the Hawaiian League felt that a show of force would be necessary. To this end, the League provided its members with guns and ammunition, and formed an alliance with the Honolulu Rifles – an all-*haole* volunteer [organization]... ..The Honolulu Rifles attained little importance until Volney V. Ashford was elected captain in late July of 1886. He had extensive and varied military experience both in the Union Army during the Civil War and in the Canadian Army. Being an excellent drillmaster, Volney Asford brought the small group up to a state of great proficiency. By the end of June, 1887 when the political crisis came to a head, the Honolulu Rifles consisted of a battalion of three companies numbering about two hundred men (31, p 83).

<sup>14</sup> Dubbed the “Bayonet Constitution” because of the manner in which it came into existence, the constitution of 1887 revised the constitution of 1864, taking away from the king the greater part of his power and transferring that power to the cabinet thereby making the Hawaiian monarch in effect a ceremonial much like the sovereign of Great Britain (31, p 84).

<sup>15</sup> Given the difficulty of determining how much power is enough for today and tomorrow, great powers recognize that the best way to ensure their security is to achieve hegemony now, thus eliminating any possibility of a challenge by another great power. Only a misguided state would pass up an opportunity to become hegemon in the system because it thought it already had sufficient power to survive (32, p 35).

in that eventful year of 1776,<sup>16</sup> despite our progress, we may be enduring another sort of intellectual epidemic which first spread through the United States late 19<sup>th</sup> century.<sup>17</sup>

Indeed, this lesson is readily illustrated on nearly every island, every continent, and through every epoch at one wishes to look: If alpine exploration should take you to Switzerland, consider a reflexion by the *Lowendenkmal*, “the most mournful and moving piece of stone in the world” (35); it is also

a paradox that DE RE MILITARI, which was to become a military bible for innumerable generations of European soldiers, was little used by the Romans for whom it was written. The decay of the Roman armies had progressed too far to be arrested by Vegetius' pleas for a return to the virtues of discipline and courage of the ancients (1, *introduction*).

But we need not turn back the pages of history that far to find another wise man who pleaded the same case, a fearless leader who “had translated the story of his country and the meaning of... war into words and ideas accessible to every American. The child who would sleeplessly rework his father's yarns into tales comprehensible to any boy had forged for his country an ideal of its past, present, and future” (36, p 587 ; cf. 37):

Fourscore and seven years ago our fathers brought forth on this continent a new nation, conceived in liberty and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation or any nation so conceived and so dedicated can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field as a final resting-place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.

But, in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The

---

<sup>16</sup> The first duty of the sovereign, that of protecting the society from the violence and invasion of other independent societies, can be performed only by means of a military force.

The first duty of the sovereign, therefore, that of defending the society from the violence and injustice of other independent societies, grows gradually more and more expensive, as the society advances in civilization. The military force of the society, which originally cost the sovereign no expense, either in time of peace, or in time of war, must, in the progress of improvement, first be maintained by him in time of war, and afterwards even in time of peace.

As it is only by means of a well regulated standing army, that a civilized country can be defended, so it is only by means of it that a barbarous country can be suddenly and tolerably civilized. A standing army establishes, with an irresistible force, the law of the sovereign through the remotest provinces of the empire, and maintains some degree of regular government in countries which could not otherwise admit of any. Whoever examines with attention, the improvements which Peter the Great introduced into the Russian empire, will find that they almost all resolve themselves into the establishment of a well regulated standing army. It is the instrument which executes and maintains all his other regulations. That degree of order and internal peace, which that empire has ever since enjoyed, is altogether owing to the influence of that army (33).

<sup>17</sup> We seem to be passing through what may be called an exceptional development of the heart without a corresponding development of the head. Through all classes of people there seems to have run a contagious epidemic of sentiment which has arisen from a really high and noble moral purpose. Persons of sensibility, refinement and intelligence have been touched as never before by a strong desire to do for the classes below them. So find and so lofty has unquestionably been the purpose behind this movement, that it seems ungracious, if not unjust, to hint at a possible improvement in it; and yet the ascertainment of the causes of things and the subsequent remedying of evils can be advanced only by the most rigorous, logical, and scientific investigation. Lofty as the well meaning purpose of many persons may be, still, if founded only on a sentimental basis, it may be as dangerous as error (34, p 2).

brave men, living and dead who struggled here have consecrated it far above our poor power to add or detract. The world will little note nor long remember what we say here, but it can never forget what they did here. It is for us the living rather to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us -- that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion -- that we here highly resolve that these dead shall not have died in vain, that this nation under God shall have a new birth of freedom, and that government of the people, by the people, for the people shall not perish from the earth (38).

Indeed, alas, this “unfinished work” is never – *and will never* – be complete. *The Struggle for Life* (24) is an unending affair; and thus, “economic power, unlike military power, is not primary, but derivative” (28, p. 95).

On September 16<sup>th</sup> 1835, Charles Robert Darwin began his exploration – both theoretical and physical – of the Galapagos archipelago.<sup>18</sup> The following day, back on board the *Beagle*, he wrote “the natural history of this archipelago is very remarkable: it seems to be a little world within itself” (13, p 454).

Yes, this simple, straight-forward, comparative method, has been and remains the method of choice amongst naturalists and true problem-solvers. Those philosopher kings searching in vain for authoritative “validity” and/or various degrees of “probability” of these profound truths which I have found, will be left untended, for Xenophanes, Democritus, Socrates, David Hume, Sir Karl Popper,<sup>19</sup> F.A. von Hayek, Bertrand Russell, and others have sufficiently tended to these long arguments. And of course one of the greatest lessons to take away from the *Logic of Scientific Discovery* (41) is the fact that scientific method does not exist (42).

Thus, in conclusion, perhaps we may be willing to consider the possibility that our humble historical narrative of cultural evolution in the Hawaiian archipelago does indeed offer a representative, descriptive, useful, and valuable politico-economic model insofar as the true nature of economic power is concerned.

I also trust I have sufficiently highlighted the controversial nature of these truths. As a naturalist, game-

---

<sup>18</sup> ON September 16, 1835, in the course of the voyage of the *Beagle*, a call was made at the islands of the Galapagos archipelago in the Pacific. This visit was one of the most momentous incidents in the life of Charles Darwin, who was on board the ship as naturalist, for the observations which he was enabled to make gave that orientation to his thoughts which ultimately led him to formulate his theory of the evolution of species (39).

<sup>19</sup> This problem had been seen and solved long before; first, it appears, by Xenophanes, and then by Democritus, and by Socrates... The solution lies in the realization that all of us may and often do err, singly and collectively, but that this very idea of error and human fallibility involves another one-the idea of objective truth: the standard which we may fall short of. Thus the doctrine of fallibility should not be regarded as part of a pessimistic epistemology. This doctrine implies that we may seek for truth, for objective truth, though more often than not we may miss it by a wide margin. And it implies that if we respect truth, we must search for it by persistently searching for our errors: by indefatigable rational criticism, and self-criticism (40, p 21).



theorist, and economist who has spent a decade in search of a solution to *The Problem of Sustainable Economic Development* (43-45), nobody was more surprised than I was that military strategy would factor so heavily, and end up playing a central role in my theoretical developments, but that is because I simply did not realize when setting out so long ago, that economic power is a derivative power. I had to discover it for myself!

And of course I have since discovered that many have reached similar conclusions (1 ; 30-34 ; 46-52).

But as a follower of the Enlightenment,<sup>20</sup> my endeavour is not to attempt to influence or even to sway; it is only to state plainly the truths I find, to cast light on my theoretical and physical explorations of the Hawaiian islands. Yes, these are the hard truths I found on the shores of Polulu Valley, carried over the Kohala Mountains to Pu'ukohala, then carried *home* with me, to serve as constant reminders of the “*intensively unusual, unstable, complicated, unreliable, temporary nature*” of this thing we know as life on earth, to serve as constant reminders to stand guard, to maintain nobility of purpose under adverse conditions, and to protect those whom I love and those whom have protected and continue to protect me:



<sup>20</sup> A follower of the Enlightenment speaks as simply as possible: we want to be understood. In this respect Bertrand Russell is our great master (53, p 206).



As noted in my introduction, I suspect this politico-economic analysis may strike many as odd, but I hope this methodological curiosity does not detract from this sound arguments. Indeed, the more I explore our world of islands, the more I see – *in far ways than one* (43-44) – that we are far too eager to cast our protective shields aside, disregarding the most fundamental lessons human evolutionary narratives have to offer. Yes,

the power to become habituated to his surroundings is a marked characteristic of mankind. Very few of us realize with conviction the intensively unusual, unstable, complicated, unreliable, temporary nature of the economic organization by which [we have] lived for the last half century. We assume some of the most peculiar and temporary of our late advantages as natural, permanent, and to be depended on, and we lay our plans accordingly. On this sandy and false foundation we scheme for social improvement and dress our political platforms, pursue our animosities and particular ambitions, and feel ourselves with enough margin in hand to foster, not assuage, civil conflict....

The outward aspect of life does not yet teach us to feel or realize in the least that an age is over.... Evidently we did not exploit to the utmost the possibilities of our economic life. We look, therefore, not only to a return to the comforts [prior to our present economic crisis], but to an immense broadening and intensification of them....

But perhaps it is only in England (and America) that it is possible to be so unconscious... The earth heaves and no one but is aware of the rumblings. There is not just a matter of extravagance or '[economic] troubles'; but of life and death, of starvation and existence, and of the fearful convulsions of a dying civilization (54, pp 3-4).

Prince Edward Island, December, 2009

1. Vegetius F (c. 390 AD) *DE RE MILITARI* [*The Military Institutions of the Romans*] 1767 Ed., Lt. John Clarke, trans. Intro for 1940 reprint by unknown author (Society of Ancients, London).
2. Schabas M (2005) *The natural origins of economics* (Univ of Chicago Press, Chicago).
3. Funk M (2008) *On the Extinction of Species by Means of Insularity Lost: Lessons from Prince Edward Island*. 20 November 2008. Seminar presented to the Department of Biology, 26 November 2008, 3:00 PM (UPEI, Charlottetown).
4. Funk M (2008) *On the Problem of Connectivity: The Value of Relative Insularity*. A seminar delivered 11 June 2008, 1:00 PM, at the Åland International Institute of Comparative Island Studies Annual Conference, "Islands of Competence: Branding Identities in a Globalized World," Parliamentary Building, Mariehamn, Åland (AICIS, Åland).
5. Funk M (2008) *On the Problem of Sustainable Economic Development: A Theoretical Solution to this Prisoner's Dilemma* 2008 AICIS Conference Proceedings, "Islands of Competence: Branding Identities in a Globalized World" (AICIS, Åland). <http://mpira.ub.uni-muenchen.de/19025/>
6. Funk M (2009) *On the Truly Noncooperative Game of Island Life: Introducing a Unified Theory of Value & Evolutionarily Stable Island Economic Development Strategy* MPRA, 19049:1-113. <http://mpira.ub.uni-muenchen.de/19049/>
7. Funk M (2008) *On the Value of Relative Insularity*. Department of Island Studies Seminar. April 24th, 2008. 2:00 to 3:30 PM. The event program noted: Topic: Which 'eco'? Comparing and Contrasting the 'development' of Barbados and Mustique. Epidemiology Classroom - 220 South (UPEI, Charlottetown).
8. Funk M (2009) *On the Extinction of Species by Means of Insularity Lost, or The Law Which Regulates the Struggle for Life: Lessons from Mustique*. International Development Week presentation. 2 February 2009, 1:30 PM, Atlantic Veterinary College, Lecture Theatre A (UPEI, Charlottetown).
9. Funk M (2009) *Solving Island Problems with Island Solutions: Amplification-by-Compression, Complex Systems, & Cultural Evolution*. Guest lecture presentation for IST 604, Research Methods & Designs in Island Studies, Main 311, 26 January 2009, 6:00 PM (UPEI, Charlottetown).
10. Funk M (2008) *On the Problem of Islandness*. Seminar presented to the Faculty of Arts, 11 March 2008, 11:00 AM. The event program noted: "A Theory of Value based upon relative insularity is introduced by outlining its various aspects as they affect Mustique. The island's positive features, which have altered its isolation and peripherality into economic assets, will be discussed" (UPEI, Charlottetown).

11. Funk M (2008) *Problem Solving on Islands: Valuable & Timeless Lessons from Alfred Russel Wallace & Charles Darwin*. Two lectures delivered to Global Issues students on 26 November 2008, at 3:00 PM & 5:00 PM (UPEI, Charlottetown).
12. Heflerich G (2004) *Humboldt's cosmos : Alexander von Humboldt and the Latin American Journey that Changed the way we see the World* (Gotham Books, New York).
13. Darwin C, FitzRoy R, ed. (1939) *Narrative of the Surveying Voyages of His Majesty's Ships Adventure and Beagle between the years 1826 and 1836, describing their examination of the Southern Shores of South America, and the Beagle's Circumnavigation of the Globe*. Vol III (Colburn, London).
14. Darwin C (1845) *Journal of the Researches into the Natural History and Geology of the Countries Visited during the Voyage of H.M.S. Beagle Round the World*. Introduction, Afterword, and General Index by E.O. Wilson, 2006 Ed. (Norton, New York).
15. Darwin C, et. al., (1849) *A Manual of Scientific Enquiry; : Prepared for the use of Her Majesty's Navy : and Adapted for Travellers in General* (Murray, London).
16. Wallace A (1855) On the Law Which has Regulated the Introduction of New Species *Ann of Nat History* 16:184-195.
17. Wallace A (1880) *Island life* (Macmillan, London).
18. Mayr E (2001) *What Evolution Is* (Basic Books, New York).
19. Mayr E (2004) *What makes biology unique: considerations on the autonomy of a scientific discipline* (Cambridge Univ Press, West Nyack).
20. Carlquist S (1974) *Island Biology* (Columbia Univ Press, New York).
21. Carlquist S (1970) *Hawaii: A Natural History; Geology, Climate, Native Flora and Fauna above the Shoreline* (Natural History Press, Garden City).
22. Carlquist S (1965) *Island Life: A Natural History of the Islands of the World* (Natural History Press, Garden City).
23. Proust M (1913) *In Search of Lost Time* (Grasset & Gallimard, Paris).
24. Darwin C (1859) *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life* (Murray, London).
25. Porti A (2005) *Explorers: The Most Exciting Voyages of Discovery – From the African Expeditions to the Lunar Landing* (Firefly, Venice).
26. Ziegler A (2002) *Hawaiian Natural History, Ecology, and Evolution* (Univ of Hawai'i Press, Honolulu).
27. Soros G (2008) *Statements before the U.S. House of Representatives Committee on Oversight and Government Reform* (Washing, DC).
28. Russell (1938) *Power: A New Social Analysis* (Allen & Unwin, London).
29. Kamakua S (1961) *Ruling Chiefs of Hawaii* (Kamehameha Schools Press, Honolulu).
30. Desha S (1922) *Kamehameha and his Warrior Kekuhaupi'o* (Kamehameha Schools Press, Honolulu).
31. Wisniewski R (1979) *The Rise and Fall of the Hawaiian Kingdom*.
32. Mearsheimer J (2001) *The Tragedy of Great Power Politics*. (Norton, New York).
33. Smith A (1776) *An Inquiry into the Nature and Causes of the Wealth of Nations* (Strahan & Cadell, London).
34. Laughlin J (1892) The Study of Political Economy in the United States *J Pol Econ* 1:1-19.
35. Twain M (1880) *A Tramp Abroad* (American Publishing Co., Hartford).
36. Kearns D (2005) *Team of Rivals: The Political Genius of Abraham Lincoln* (Simon & Schuster, New York).
37. Barton W (1930) *Lincoln at Gettysburg* (Bobbs-Merrill, Indianapolis).
38. Lincoln A (1863) *Gettysburg Address* (Library of Congress, Washington).
39. Nature (1935) *Centenary of Darwin's visit to the Galapagos Archipelago*, 28 September 1935.
40. Popper K (1963) *Conjectures and Refutations: The Growth of Scientific Knowledge* (Routledge, London).
41. Popper K (1959) *The Logic of Scientific Discovery* (Routledge, London).
42. Popper K (1956) ON THE NON-EXISTENCE OF SCIENTIFIC METHOD. Preface from 1956 Ed., Vol. I of the 1939 [German] Ed. of *The Logic of Scientific Discovery* (Routledge, London).
43. Funk M (2009) On the Truly Noncooperative Game of Life on Earth: In Search of the Unity of Nature & Evolutionary Stable Strategy *MPRA Paper No. 17280* <http://mpra.ub.uni-muenchen.de/17280/>
44. Funk M (2009) On the Origin of Mass Extinctions: Darwin's Nontrivial Error, *Proc Linn London MPRA Paper No. 18944* <http://mpra.ub.uni-muenchen.de/18944/>
45. Funk M (2009) On the Travesty of the Tragedy of the Commons: Hardin's Nontrivial Error *MPRA Paper No. 19203* <http://mpra.ub.uni-muenchen.de/19203/> *Proc Linn Soc* (forthcoming).
46. Aumann R (2006) War and Peace. Nobel Memorial Lecture, 8 December 2005 *Proc Natl Acad Sci USA* 103:17075–17078.
47. Bartmann B (1991) *A World Made Safe for Small States* (Institute of Island Studies, Charlottetown).
48. Schelling T (2005) *An Astonishing Sixty Years: the Legacy of Hiroshima*. Sveriges Riksbank Prize Lecture in the memory of Alfred Nobel. December 2005.
49. Trevorton G, Jones S (2005) *Measuring National Power* (RAND, Santa Monica).
50. Gray A (1989) *Warfighting – MCDP 1* (US Marine Corps, Washington).
51. Ignatieff M (2004) *Political Ethics in the Age of Terror: The Lesser Evil* (Princeton Univ Press, Princeton).
52. Clow F (1893) Our Commercial Relations with the Hawaiian Islands *Journal of Political Economy* 1:280-284.
53. Popper K (1999) *All Life is Problem Solving* (Routledge, London).
54. Keynes J (1920) *The economic Consequences of the Peace*. 2004 Ed. (Transaction Publishers, New Brunswick).